CIS 230 Drop In Session 3 Problem Sheet

Selections and More Mathematical Operations

1. Generate a program that Use Math.random() to generate 3 integers between 0-99 and asks the user to add them. Output if the user is correct or incorrect
   1. You must use a selection statement (I don’t care if you use if-else or switch)
2. Write a program that generates a random number between 1 and 12 and outputs what month of the year it is.
3. Write a program the calculates the perimeter of a triangle. The triangle is valid if the sum of every pair of two edges is greater than the remaining edge. Output the perimeter to the user.
   1. How many possible combinations are there? We have three sides to pick from and we must choose 2 and compare it to the third. Because we are adding order does not matter so there are 3 possible combinations of sides.
4. ☆☆ (Challenge Problem)
   * 1. Exercise 3.27 In Revel Textbook
5. ☆☆☆(Challenge Problem)
   1. The Greatest Common Divisor while seeming like a trivial thing taught in grade school math has many applications in higher mathematics and computer science.
   2. Fine the Greatest Common Divisor of two integers n1 and n2. First make n1 the larger number. Then check if n2 divides n1. Then traverse down (d-1),(d-2),..,2,1. The first number that divides n1 and n2 is the GCD.
      1. Keep this idea in mind. The problem comes up often and is frequently solved using recursion. A bad idea.